PRELIMINARY DRAFT MARCH 1, 1973

PROCEDURES MANUAL

Pilot Phase

National Railroad Grade Crossing Inventory

ASSOCIATION OF AMERICAN RAILROADS

~~JCH~~
DKT

See no. 5.
Are tools available
for metal or plastic straps?

HMS

PART I: Location of all crossings

ITEM 1 Identify the state where the crossing is located. If the crossing is located on a state boundary so that parts of the crossing lay in two or more states, identify all states.

ITEM 2 Identify the county where the crossing is located. If the crossing is on a county line so that parts of the crossing lay in two or more counties, identify all counties.

ITEM 3 Identify the name of the incorporated city where the crossing is located. If not within a city, omit this item and complete Item 4.

ITEM 4 If not within a city, identify the name of the nearest city, town, or village.

ITEM 5 Identify type of highway such as U. S. numbered, State, County, town, etc., and number of highway. Number of highway should be as posted on the highway or found on state or county maps. If there is more than one number, enter all numbers.

ITEM 6 If highway has a name, indicate such name. If private roadway has a name, state such name in parenthesis.

ITEM 7 Signify a county map identification or other map reference number provided by Highway Department to specifically identify the position of the crossing on the street and road system. If not available prior to field survey, leave blank.

Other I.D. no. refers to crossing number currently on file by public or private agency or presently installed at the crossing.

ITEM 8 State name of reporting company. Reporting company should be the "operating company" that owns and maintains the roadbed, tracks, and signal system controlling the crossing. If reporting company is other than owning company, enclose reporting company name in parenthesis. To avoid duplicate reporting of jointly owned, maintained or used crossings, the railroad which is designated as the reporting road for reporting to ICC (Form 510B and 511) shall be the reporting road.

ITEM 9 If railroad system, for operating administrative purposes, is divided into Regions, Lines, or Districts under jurisdictions of General Managers (or equivalent), state name of Region, Line, or District. If railroad system is not so divided, leave Item 9 blank.

ITEM 10 If railroad system (and/or Region, Line, or District), for operating administrative purposes, is divided into divisions or similar classifications under jurisdictions of Superintendents and Division Engineers (or equivalent), state name of division or other classification. If system is not so divided, leave Item 10 blank.

ITEM 11 State name of time table station of operating company.

ITEM 12 If track is an Industry Lead, Industry Spur, Yard Lead, Wye, etc., state name of such track.

ITEM 13 State railroad mile post in miles and hundredths of miles. (53 feet is approximately 1/100 mile.) Enough description material must be in items 12 and 13 so that the crossing can be identified along a RR line.

ITEM 14-16 Check single item which classifies the crossing. If crossing is private, also specify signs or signals if present.

Complete the remainder of the form only for public vehicle crossings at-grade. (If vehicle crossings at-grade cannot be clearly identified as private, the remainder of the form should be completed.)

NOTE: Person completing Crossing Inventory Form please sign and date (in upper right hand corner.)

U.S. DOT—AAR CROSSING INVENTORY FORM

Attach I.D. Number

Pilot Project (PLEASE PRINT)

Part I Location and Classification of All Crossings (Must Be Completed)

1. State
2. County
3. City
4. Nearest City
5. Highway No.
6. Street or Road Name
7. County Map Ref. or Other I.D. No.
8. Railroad Operating Company
9. Railroad Division or Region
10. Railroad Subdivision or District
11. Nearest RR Timetable Station
12. Branch or Line Name
13. Railroad Mile Post

DO NOT WRITE IN THIS SPACE
State
County
City
Nearest City
RR Code
RR Line Name
Timetable Station

14. Pedestrian Crossing
- ☐ 1. at grade
- ☐ 2. RR under
- ☐ 3. RR over

15. Private Vehicle Crossing
- ☐ 1. at grade
- ☐ 2. RR under
- ☐ 3. RR over
- ☐ 4. signs—specify
- ☐ 5. signals—specify
- ☐ 6. none

16. Public Vehicle Crossing
- ☐ 1. at grade
- ☐ 2. RR under
- ☐ 3. RR over

COMPLETE REMAINDER OF FORM ONLY FOR PUBLIC VEHICLE CROSSINGS AT GRADE

PART II: Detailed information for public vehicular at grade crossing only

ITEM 1A Typical means normal or average daily train movements. Through trains are trains whose primary responsibility is to move cars over the road, may have a limited number of pickups and setouts along the route. Classify all others, i.e., locals, industrial runs, switch engine as switching movements. Include total number of train movements both for the reporting company and for any other railroad operating over reporting company's track at the crossing.

ITEM 1B Check if train frequency is less than one train per day.

ITEM 2 Both maximum timetable speed and the typical speed range of trains over the crossings are required.

ITEM 3 A track is considered main if through trains operate on track. Give number and specify all other types of track.

ITEM 4 Specify names of other railroads that operate separate tracks within the protective devices operating for your crossing.

ITEM 5 Specify names of other railroad companies that operate trains over your track at the crossing.

ITEM 6 *If more than one type of protection is present, fill in all applicable types of protection.*

ITEM 6A The number of masts with crossbucks is requested not a count of all crossbucks signs. Two or more crossbucks mounted on a single mount are counted as one crossbuck. If the crossing has a train activated device, do not count the crossbucks mounted on that device.

A standard highway stop sign is red with white letters and has eight sides. Classify all other stop signs as "other stop signs."

ITEM 6B Make a separate count of gates with the red and white reflectorized arms from other marked gates.

Separate cantilevered flashers between those over traffic lanes of the approach roadway from those either not reaching the roadway or over only parking lanes, turnout lanes, or shoulders.

Count all flashers on a single mast as one flasher, do not count flasher heads separately.

Highway signals refer only to train activated red and green signals that control street traffic *over the crossing.* Do not count highway signals controlling a nearby intersection even if they are interconnected with the crossing protection.

Flashing lights not in accord with the latest AAR Bulletin on Railroad-Highway grade crossing protection should be reported as other flashing lights.

Count all wigwags.

Count bells if present, either alone or in conjunction with other protection.

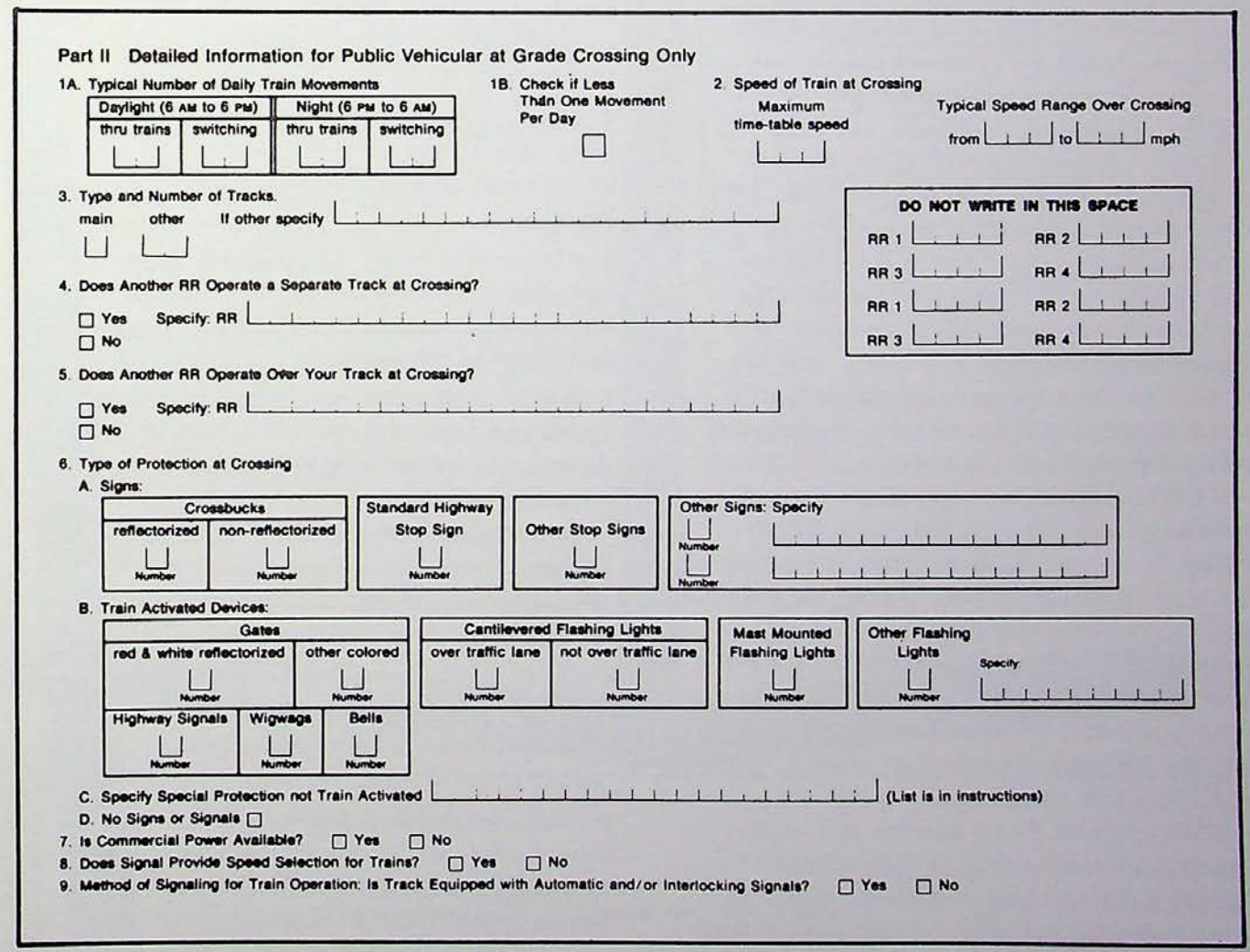
ITEM 6C Examples of special protection - not train activated are: (1) Manually operated gates; (2) train crew flagging the crossing; (3) watchmen; and (4) floodlights. For watchmen and for manually operated gates, the number of hours daily in effect should be indicated. For floodlighting, the number of masts with lights should be reported. Only floodlighting which is of a type distinctive in volume, distribution or color from ordinary street or other lighting is to be reported.

ITEM 6D Check if no signs or signals are present.

ITEM 7 Check *Yes* if commercial electric power is available within 500 feet of the crossing.

ITEM 8 Check *Yes* if the signal is equipped with a device to provide a uniform warning time for the speed range of trains listed in Part II, Item 2.

ITEM 9 Check *Yes* if track has some type of automatic signals or interlocking to control train operation.



PART III: Physical Data

ITEM 1 Check box which best describes the predominant type of development in the vicinity (up to 1000 feet) of the crossing based on the examples below. (More than one may be checked if a combination clearly predominates.)

1. Open space - undeveloped or sparsely developed, very lightly populated, agricultural
2. Residential - built-up residential area
3. Commerical - retail stores and businesses, offices, personal services
4. Industrial - manufacturing, construction, heavy products, factories, warehouses
5. Institutional - schools, churches, hospitals, and other community facilities

ITEM 2 Check box which most closely describes the smallest angle between the highway and the track. (The angle may be estimated by eye or with a simple device, such as a protractor.)

ITEM 3 Enter the prevailing number of traveled traffic lanes approaching the crossing for the highway which crosses the track. Do not include shoulders or lanes that are typically used for parking. If there is a difference in the number of lanes on each side of the crossing, enter the larger number.

ITEM 4 Check *Yes* only if lanes are specifically designed to accomodate vehicles required to stop at crossings.

ITEM 5 Enter *Yes* if highway is paved with material on which pavement markings can be effectively maintained. Enter *No* if highway surface is gravel, dirt or surface treatment on markings which cannot be maintained.

ITEM 6 Check if pavement markings as prescribed or generally similar to those contained in highway traffic manuals are present. If both stop lines and RR crossing symbols are present, check both. If neither, check *None.*

ITEM 7 Check *Yes* if advance signs as prescribed or generally similar to those contained in highway traffic manuals are present. Place a zero on the form after the word *No* if no advance signs are present.

ITEM 8 Enter the number type which most closely fits one of the descriptions below.

1. *Sectional Treated Timber.* Units approximately 8 feet in length of treated timber, installed and removable, individually assembled for maintenance and replacement purposes.
2. *Full Wood Plank.* Wood surface, other than sectional treated timber, covering the entire crossing area above the crossties.
3. *Bituminous.* Bituminous surface over the entire crossing area or in the area between planks or other material forming flangeway openings, with or without single planks on outside of running rails.
4. *Concrete Slab.* Precast concrete slabs, installed and removable, individually, for maintenance and replacement purposes.
5. *Concrete Pavement.* Concrete surface which is continuous over the track area and is not removable except by destruction of the surface.
6. *Rubber Slabs.* Preformed rubber sections, installed and removable, individually, for maintenance and replacement purposes.
7. *Metal Sections.* Preformed sections of steel or other metal, installed and removable, individually, for maintenance and replacement purposes.
8. *Other Metal.* Complete coverage of the crossing area with railroad rails or other metal materials not removable in limited sectional units.
9. *Unconsolidated.* Ballast or other unconsolidated material placed above the tops of crossties, with or without planks on one or both sides of the running rails.
0. None of the above.

Part III Physical Data

1. Type of Development [1] [2] [3] [4] [5]
2. Smallest Crossing Angle
   ☐ 0°–30° ☐ 30°–60° ☐ 60°–90°
3. Number of Traffic Lanes on Approach Road. ☐ (Number)
4. Are Truck Pullout Lanes Present? ☐ Yes ☐ No
5. Is Highway Paved? ☐ Yes ☐ No
6. Are the Following Pavement Markings Present?
   ☐ Stoplines ☐ RR Xing Sym. ☐ None
7. Are RR Advance Warning Signs Present? ☐ Yes ☐ No
8. Crossing Surface ☐ (Number Type)

PART IV: Highway Department Information

ITEM 1 Highway System - enter the code as shown below.

Code

01 Interstate, rural, final location
02 Interstate, urban, final location
03 Other FA primary, rural
04 Other FA primary, urban
05 FA secondary rural, State jurisdiction
06 FA secondary urban, State jurisdiction
07 FA secondary rural, local jurisdiction
08 FA secondary urban, local jurisdiction
09 Other State highways, rural
10 Other State highway, urban
11 Other rural roads
12 Other city streets
14 Urban

The coding for toll roads is as follows: For toll roads on which trucks are permitted, add 20 to the appropriate system code above. For example, code 24 would be a toll facility on the Federal-aid primary in urban areas system, not Interstate. For toll parkways where trucks are prohibited, 60 should be added to the appropriate system code.

ITEM 2 Is crossing on State highway system - enter yes or no.

ITEM 3 Functional Classification - enter the appropriate code as shown below for the 1990 Functional Classification as developed in the National Highway Functional Classification and Needs Study (1970 to 1990).

Rural		Urban				
		Population (thousands)	*5-10*	*10-25*	*25-50*	*Over 50*
Interstate	1					
Other Principal Arterial	2	Interstate	11	21	31	41
		Other Freeway and				
Minor Arterial	3	Expressway	12	22	32	42
Major Collector	4	Other Principal Arterial				
Minor Collector	5	Minor	13	23	33	43
		Arterial	14	24	34	44
Local	6	Collector	15	25	35	45
		Local	16	26	36	46

ITEM 4 Enter the estimated present average daily traffic (total both directions) based on available traffic information. A reasonable estimate of the ADT should be made even when traffic information is not available, if at all possible.

ITEM 5 Enter the estimated percentage of trucks in the traffic stream.

Part IV Highway Department Information

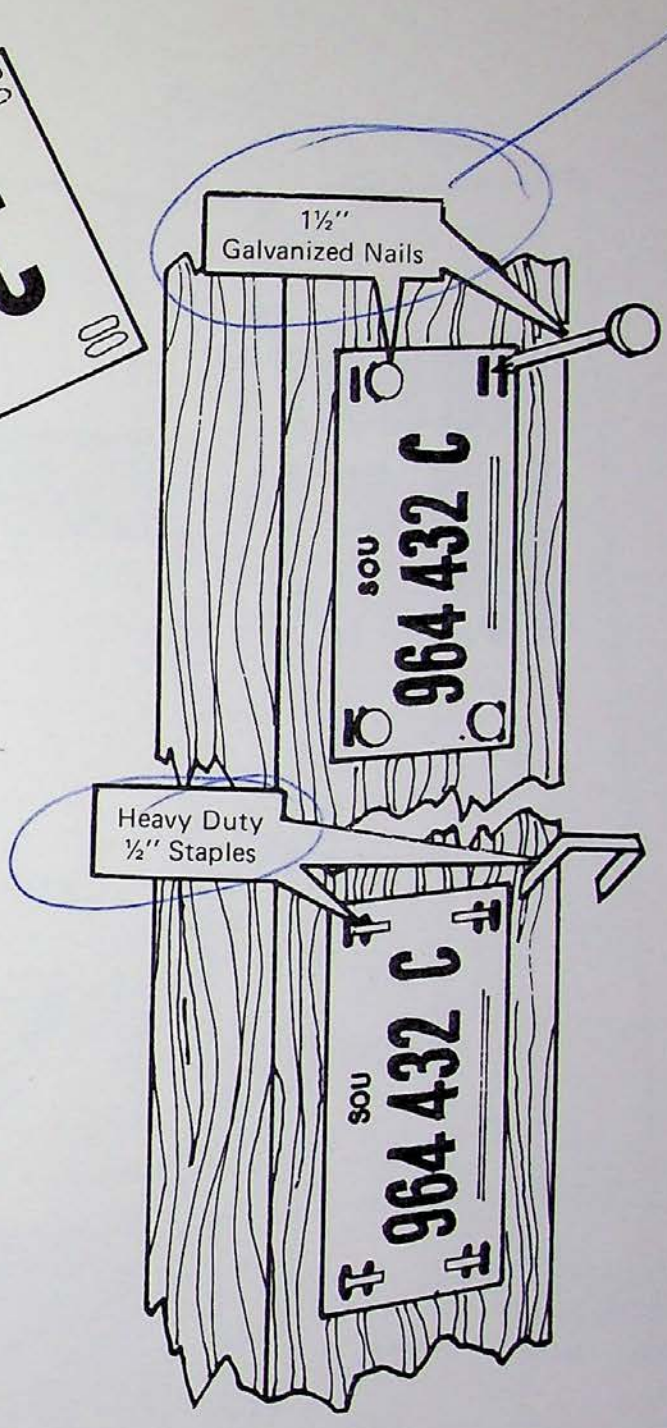
1. Code Highway System. ☐☐
2. Is Crossing on State Highway System? ☐ Yes ☐ No
3. Code Functional Classification of Road over Crossing. ☐☐
4. Estimate AADT ☐☐☐☐☐☐
5. Estimate Percent Trucks, If Available. ☐☐

5

Number Board Mountings

METAL MOUNT

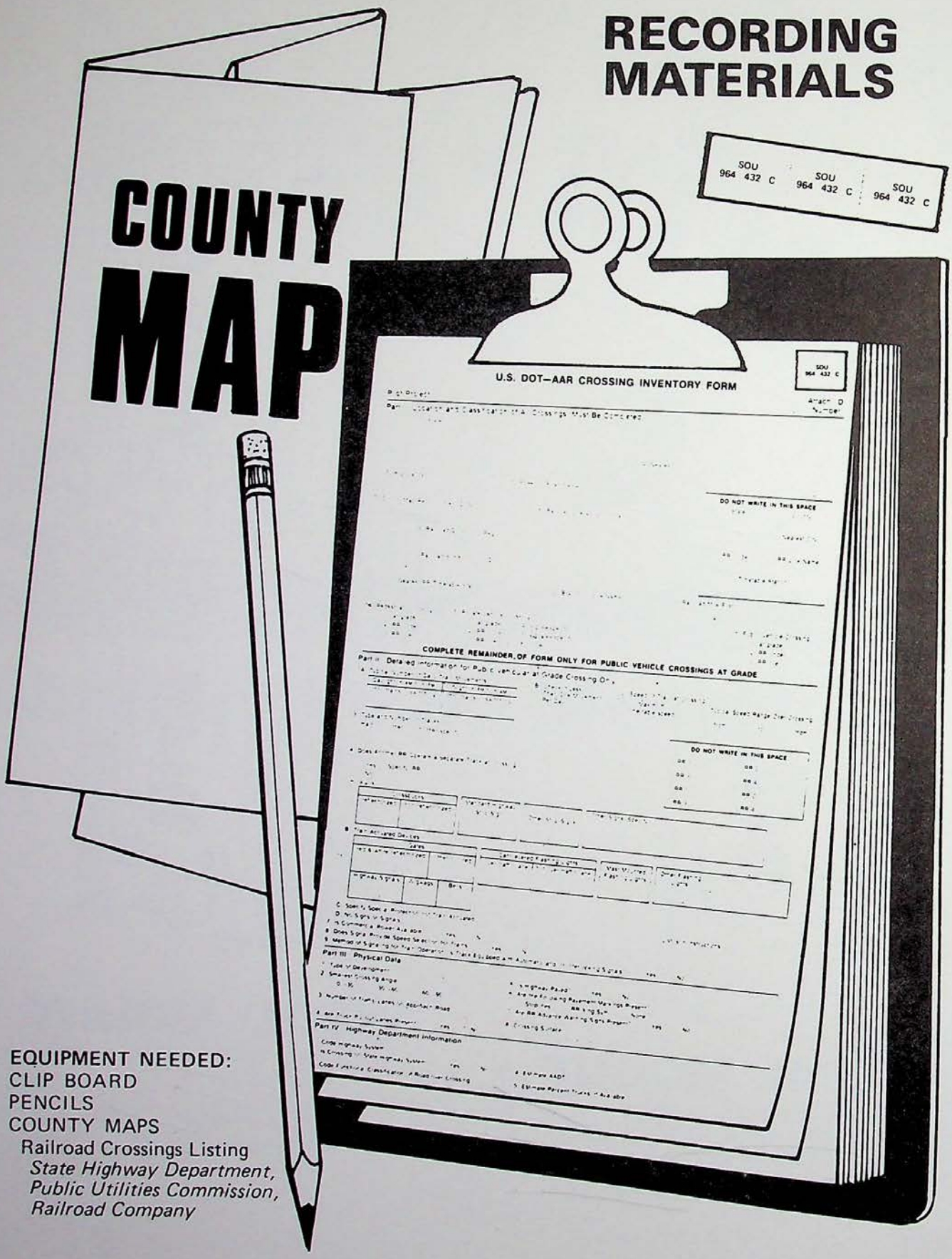
EQUIPMENT NEEDED:
STRAPPING MATERIAL
(Metal or Plastic)
BINDING TOOL
HAMMER



WOOD MOUNT

EQUIPMENT NEEDED:
HAMMER
NAILS
STAPLE GUN
STAPLES

RECORDING MATERIALS



EQUIPMENT NEEDED:

CLIP BOARD

PENCILS

COUNTY MAPS

Railroad Crossings Listing

State Highway Department, Public Utilities Commission, Railroad Company

GATES
Part II, Item 6B

AUTOMATIC GATES
Number board will be installed using strapping material.
The installation should be made just above eye level.

WIG-WAGS
Part II, Item 6B

WIG-WAG SIGNAL
Number board will be installed using strapping material.
The installation should be made just above eye level.

CANTILEVERED FLASHING LIGHTS

Part II, Item 6B

CANTILEVER UNIT

Number board will be installed using strapping material. The installation should be made just above eye level.

MAST MOUNTED FLASHING LIGHTS

Part II, Item 6B

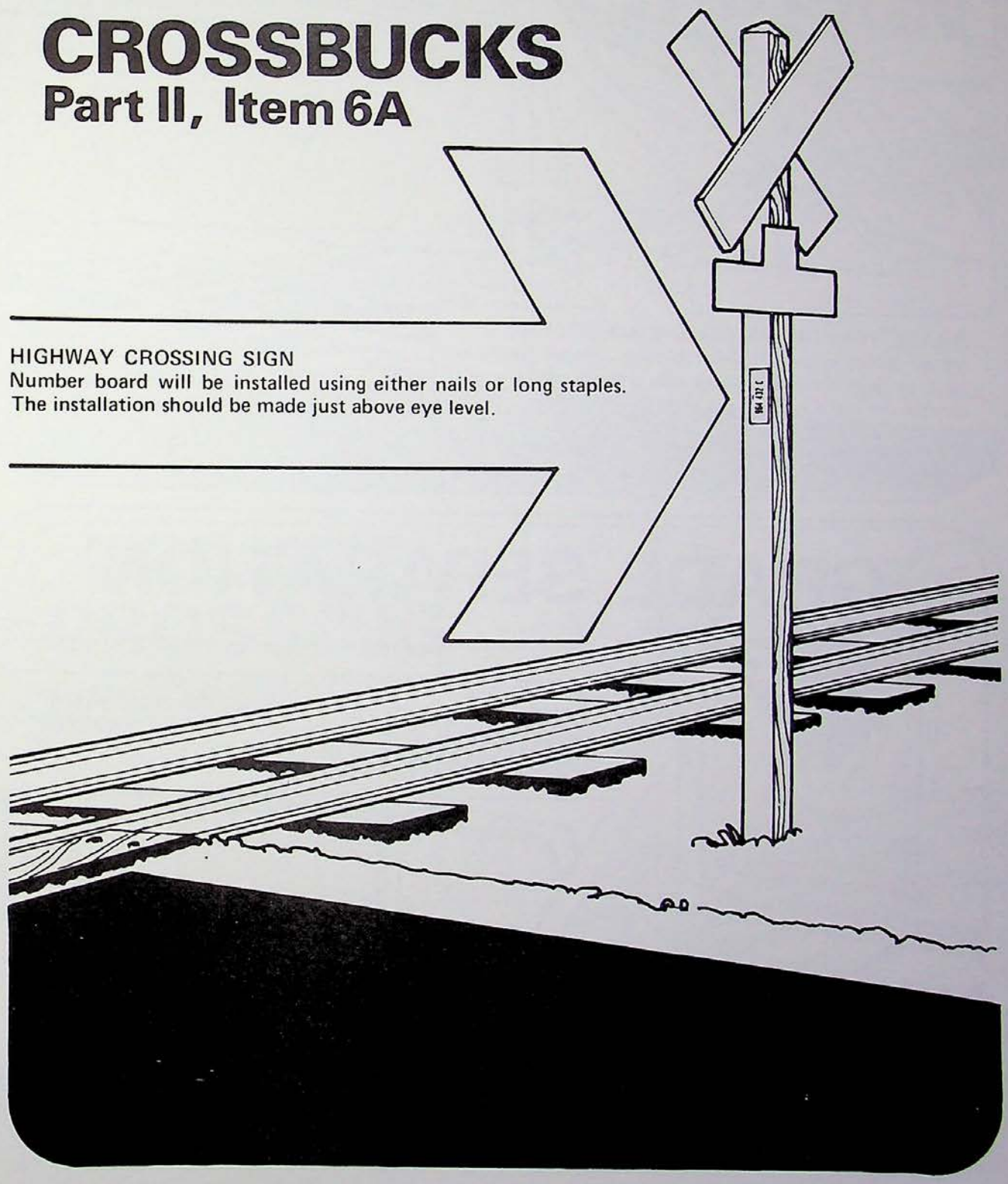
STANDARD FLASHING LIGHTS

Number board will be installed using strapping material.

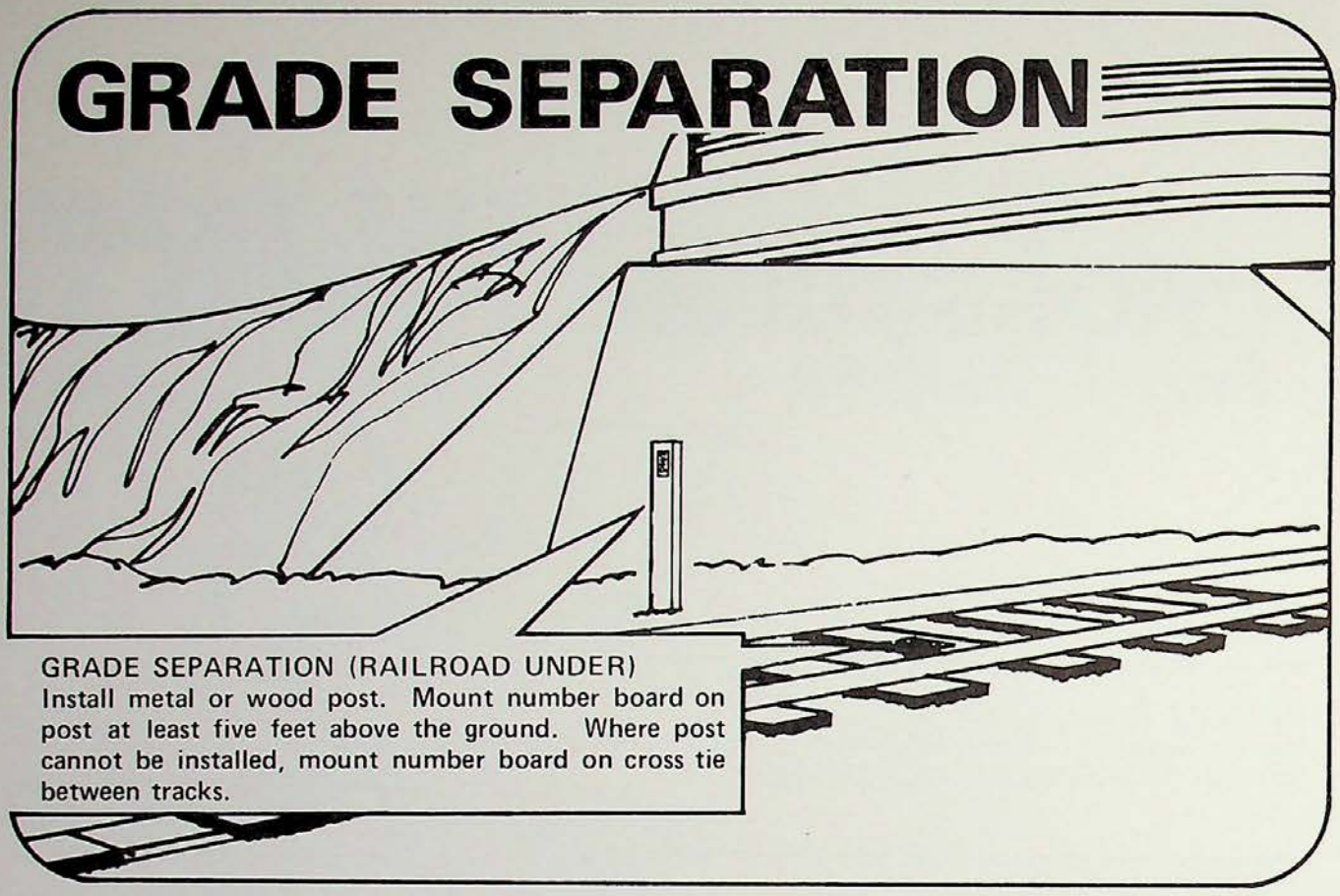
The installation should be made just above eye level.

CROSSBUCKS
Part II, Item 6A

HIGHWAY CROSSING SIGN
Number board will be installed using either nails or long staples.
The installation should be made just above eye level.



GRADE SEPARATION

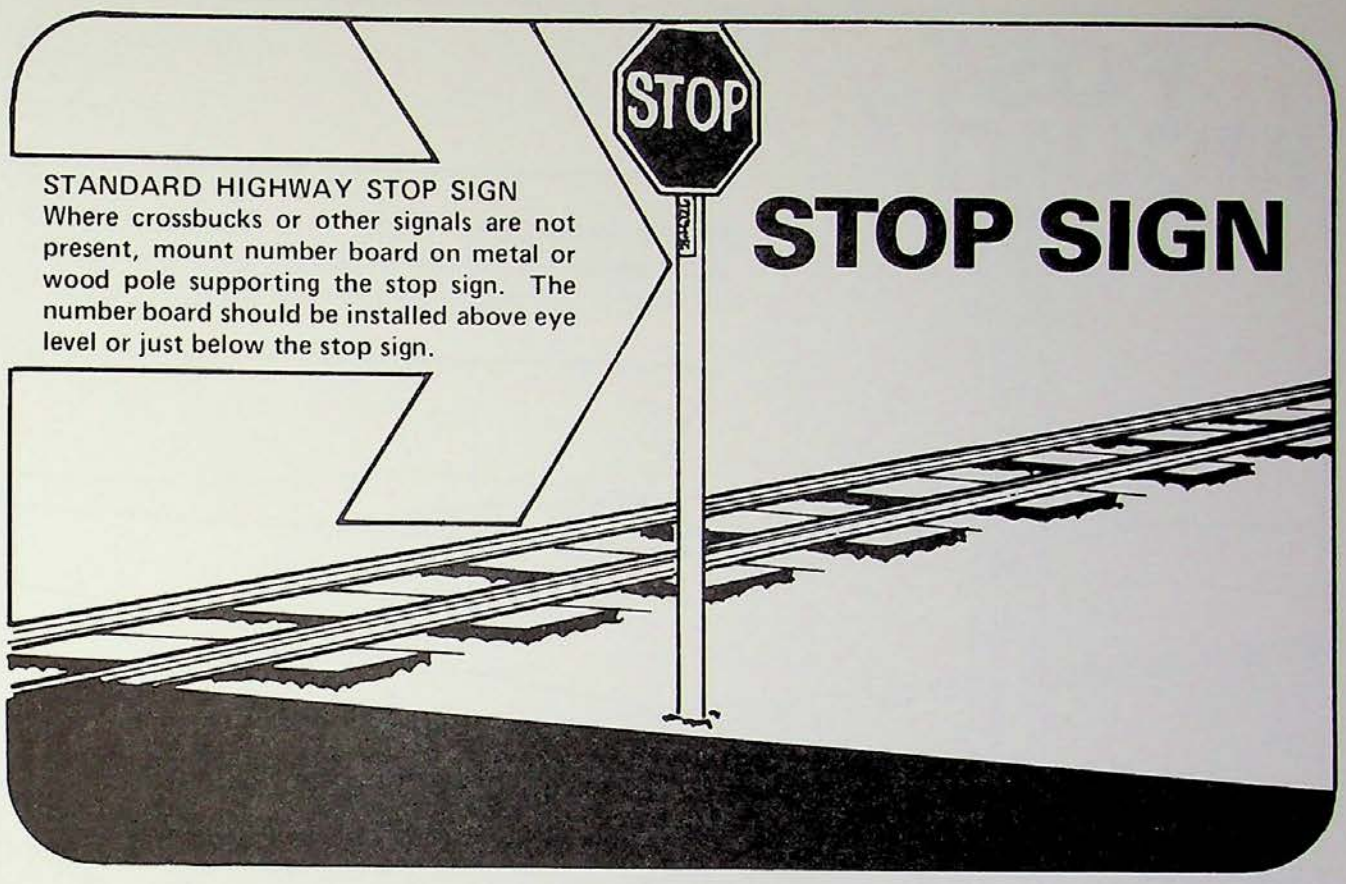


GRADE SEPARATION (RAILROAD UNDER)
Install metal or wood post. Mount number board on post at least five feet above the ground. Where post cannot be installed, mount number board on cross tie between tracks.

GRADE SEPARATION

GRADE SEPARATION (RAILROAD OVER)
Install metal or wood post. Mount number board on post at least five feet above the ground. Where post cannot be installed, mount number board on railroad structure.

STOP SIGN



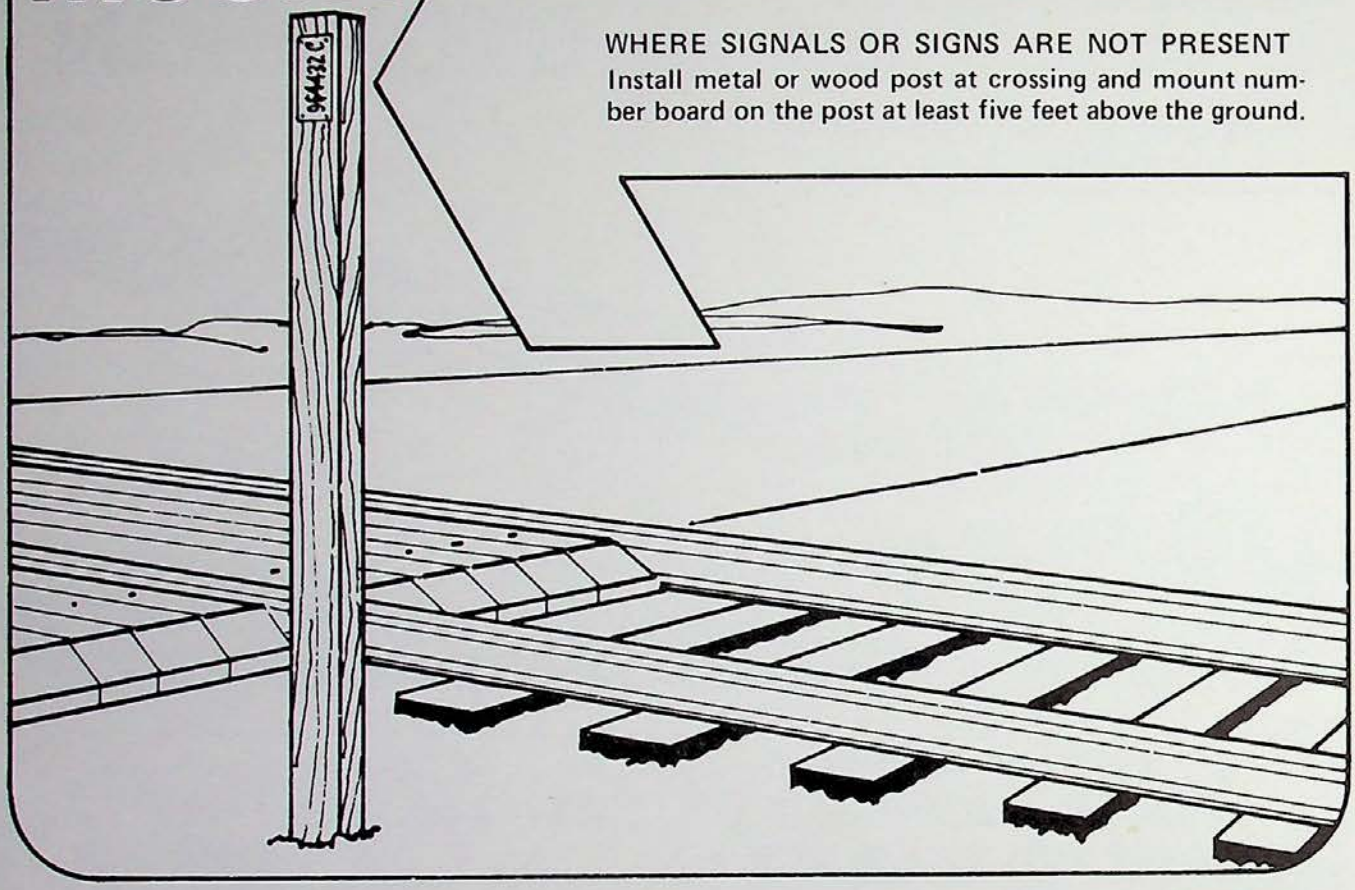
STANDARD HIGHWAY STOP SIGN
Where crossbucks or other signals are not present, mount number board on metal or wood pole supporting the stop sign. The number board should be installed above eye level or just below the stop sign.

PRIVATE CROSSING

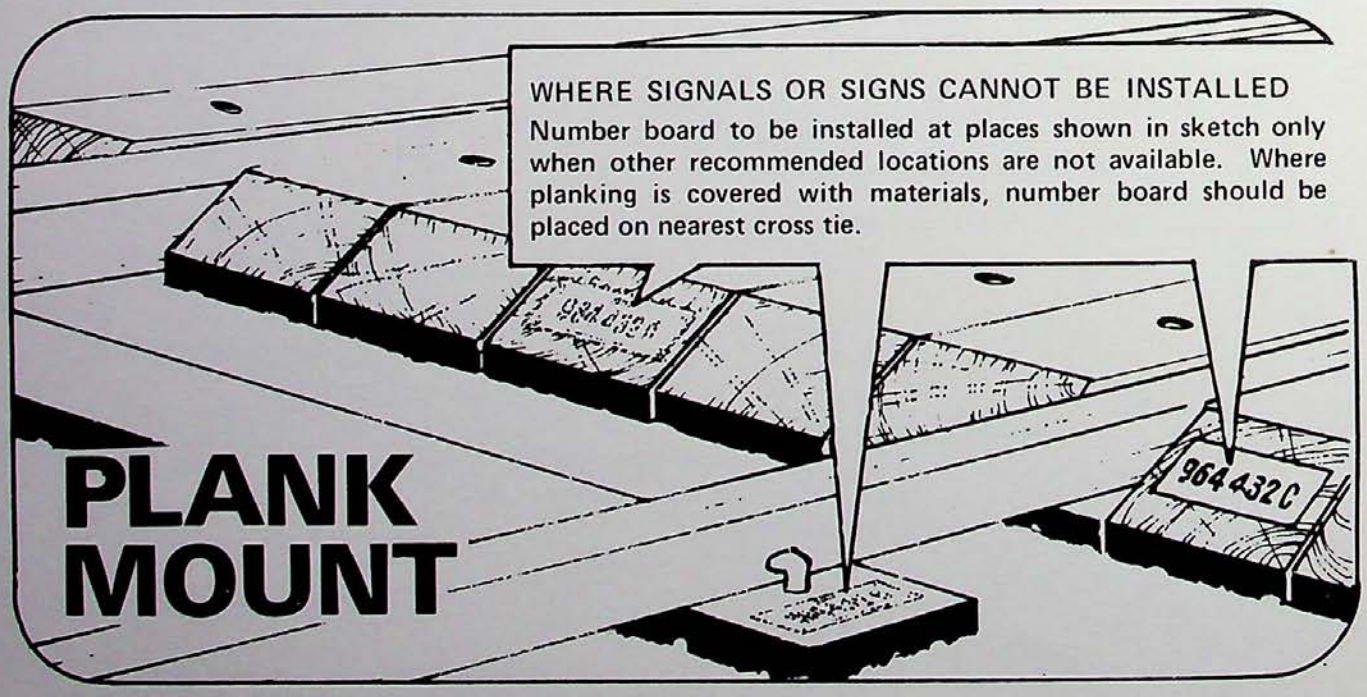
PRIVATE CROSSING SIGN
Where private crossing signs have been installed, place number board just below sign. If other protective devices are present, place number board on protective device as shown in other illustrations.

POST MOUNT

WHERE SIGNALS OR SIGNS ARE NOT PRESENT
Install metal or wood post at crossing and mount number board on the post at least five feet above the ground.



WHERE SIGNALS OR SIGNS CANNOT BE INSTALLED
Number board to be installed at places shown in sketch only when other recommended locations are not available. Where planking is covered with materials, number board should be placed on nearest cross tie.



PLANK MOUNT

6

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